AMENDMENTS TO THE CLAIMS

1.   (Original)   A method for using a digital electrical computer in convex futures contract clearing, the method including the steps of:

providing a clearing computer system including a digital electrical computer having a processor electrically connected to an input device for receiving input information and producing input electrical signals representing the input information, to an output device for producing a display corresponding to output electrical signals, and to a printer device for printing corresponding to the output electrical signals; and

programming the processor to form circuitry in the processor to control the computer system in signal processing responsive to the input electrical signals to produce other electrical signals including the output electrical signals, in data processing substeps of:

receiving, as a portion of the input information, a base tick value for a convex futures contract, an expiration time for the convex futures contract, identification of a buyer of the convex futures contract, identification of a seller of the convex futures contract, a trade price for the convex futures contract, and a settlement price for the convex futures contract;

computing a discount factor from the settlement price;

determining an actual tick value by applying the discount factor to the base tick value;

specifying an amount of money a clearing entity must transfer between the buyer and the seller for clearing the convex futures contract by applying the actual tick value to a difference between the trade price data and the settlement price;

triggering a computer-assisted transfer of the amount of money; and

generating, at the printing device, documentation including the computed amount of money transferred, in clearing the trade of the convex futures contract.

2. (Original) The method of claim 1, wherein the substep of computing a discount factor includes the substep of applying a bootstrap method to the settlement price.

3. (Original) The method of claim 1, wherein the substep of determining an actual tick value includes applying the discount factor to the base tick value to produce a variable actual tick value.

4. (Original) The method of claim 2, further including the substeps of:

generating a cumulative price quote for a group including another convex futures contract; and

displaying the cumulative price quote on the display device to convey information for use in trading the group.

5. (Original) The method of claim 2, wherein:

generating a price for a floor option on the convex futures contract; and

displaying the price for the floor option on the display device to convey information for use in trading the floor option.

6. (Original) The method of claim 5, wherein the step of generating a price includes accounting for a limit, the limit from the group consisting of a cap, a floor, or both, in generating the price.

7. (Original) The method of claim 2, further including:

communicating data representing the convex futures contact from the clearing computer system to a second digital electrical computer system; and

using the data in computing a price for an Over-The-Counter option.

8. (Original) The method of claim 7, wherein the forming an interest rate swap including the convex futures contract includes:

computing interest payments for the interest rate swap with the second computer.

9. (Original) The method of claim 2, further including:

communicating data representing the convex futures contract from the clearing computer system to an other digital electrical computer system; and

computing, with the other digital electrical computer system, a zero coupon libor curve in real time and applying the zero coupon libor curve to a portfolio of interest rate derivatives to create forward rates, expected cash flows, and present value of the case flows for risk management manipulation of the portfolio.

10. (Original) The method of claim 9, further including:

calculating, with the other digital electrical computer system, an exposure indicia of movement in the curve.

11. (Original) The method of claim 2, further including:

publishing daily quotes of the discount factor by clearing digital electrical computer system to provide information for use in trading the convex futures contract.

12. (Original) The method of claim 2, wherein:

publishing trading discount factor data in real time on a display board electrically connected to the clearing digital electrical computer system to provide information for use in trading the convex futures contract.

13.   (Original)   The method of claim 2, wherein:

conveying trading discount factor data in real time to a plurality of vendor computers electrically connected to the clearing digital electrical computer system to provide information for use in trading the convex futures contract.

14.   (Original)   The method of claim 2, wherein:

conveying trading discount factor data in real time to a plurality of broker computers electrically connected to the clearing digital electrical computer system to provide information for use in trading the convex futures contract.

15.   (Original)   The method of claim 2, wherein:

conveying trading discount factor data in real time to a plurality of customer computers electrically connected to the clearing digital electrical computer system to provide information for use in trading the convex futures contract; and

in response to a trade triggered from one of the customer computers, generating confirmation statement at the clearing digital electrical computer to document the trade triggered from one of the customer computers.

16.   (Previously Presented)   A method for producing convex futures contract documentation using a clearing computer system, said method including:

providing a clearing computer system including a digital electrical computer having a processor electrically connected to an input device for receiving input information and producing input electrical signals representing the input information, the processor further electrically connected to a printing device for printing output electrical signals from the clearing computer system; and

programming the processor to control the clearing computer system in signal processing responsive to the input electrical signals to produce other electrical signals including the output electrical signals, in data processing substeps of:

receiving, as a portion of the input information, a base tick value for a convex futures contract, an expiration time for the convex futures contract, identification of a buyer of the convex futures contract, identification of a seller of the convex futures contract, a trade price for the convex futures contract, and a settlement price for the convex futures contract;

computing a discount factor from the settlement price using the clearing computer system;

determining an actual tick value by applying the discount factor to the base tick value using the clearing computer system;

specifying an amount of money for transfer by a clearing entity between the buyer and the seller for clearing the convex futures contract by applying the actual tick value to a difference between the trade price data and the settlement price;

triggering a transfer of the amount of money using the clearing computer system; and

generating, at the printing device, documentation including the amount of money specified by the clearing computer system to be transferred between the buyer and the seller in clearing the convex futures contract.

17. (Previously Presented) The method of claim 16, wherein the substep of computing a discount factor includes applying a bootstrap method to the settlement price.

20. (Previously Presented) A futures contract trading and clearing apparatus, said apparatus comprising:

an input device for receiving user input information, the user input information including a base tick value and a trade price;

a database for storing the user input information;

a processor including programmable circuitry for calculating a settlement amount based on the user input information, wherein the processor calculates the settlement amount by

calculating a discount factor;

applying the discount factor to the base tick value to determine an actual tick value; and

calculating the settlement amount based on the actual tick value, the trade price, and user settlement data;

a trigger for computer-assisted transfer of funds based on the settlement amount; and

an output for outputting at least one of the user input information and the settlement amount.